Remarks

Claims 53-79 are currently pending. Applicants assert that all claims are in condition for allowance as set forth more fully below.

Interview Summary

A brief phone interview was conducted on March 14. The Examiner briefly stated that the arguments presented in the interview agenda, which are repeated below, had merit and warranted a new search. The examiner requested that the arguments be submitted formally in writing.

102 Rejections

Claims 53, 54, 56, 57 and 75 stand rejected under 35 USC 102(b) as being anticipated by Ramsier (US Pat 5,844,400). Claims 66-68 and 70 stand rejected under 35 USC 102(e) as being anticipated by Bork (US Pat 6,633,932). Applicants respectfully traverse these rejections.

Claims 53, 54, 56, 57 and 75

The Office Action rejects independent claims 53 and 75 by stating that Ramsier teaches all of the elements. The Office Action expressly equates units **200** (a Processor) and **204** (an analog-to-digital converter) of FIG. 4 of Ramsier to the supervisory circuit and the voltage converter, respectively, of claims 53 and 75. Ramsier teaches a +5V reference voltage pulled high through a pull up resistor **210** and a+5Vvoltage from the cradle power supply **208**. Ramsier further teaches that the function of this arrangement is to detect when the secondary battery **180** is docked because the depleted battery attached to contacts **64/114** pulls the reference voltage below +4.7V.

Claims 53, 54 and 57

Claim 53 recites a supervisory circuit associated with a voltage requirement of a secondary battery and a voltage converter in communication with the supervisory circuit, wherein when the secondary battery is in contact with the supervisory circuit, the supervisory circuit instructs the voltage converter to supply a voltage to the secondary

battery in accordance with the voltage requirement. Thus, the voltage converter gets an instruction from the supervisory circuit based on the supervisory circuit's association with the voltage requirement of the secondary battery. The voltage converter then supplies a voltage to the secondary battery (i.e. the required voltage) based on the instruction. These recitations of claim 53 are contrary to Ramsier.

Ramsier does not teach that the processor **200** instructs the analog-to-digital converter **204** to deliver a specific voltage to the battery **180** in compliance with the battery's voltage requirement. The analog-to-digital converter **204** in Ramsier merely converts the analog voltage in the status line **186(a/b)** to a digital signal for input into the processor **200** that detects the presence of a battery and the type of battery. (Col. 7, l. 58-65; Fig. 7). The analog-to-digital converter **204** does not supply a voltage to the secondary battery as asserted. (Col. 7, l.47-67; Col. 8, l.39-44; Col. 9, l. 20-32). Since Ramsier does not teach electronic circuitry instructing a voltage controller to provide a voltage to the secondary battery in response to a voltage requirement, Ransier does not teach all of the claimed elements and for these reasons claim 53 is allowable over Ransier. Dependent claims 54 and 57 depend from allowable independent claim 53 and are allowable over Ramsier for at least the same reasons.

Claims 56 and 75

Claims 56 and 75 recite, in pertinent part, instructing a voltage converter to receive power from a power source, to convert the power to meet the voltage requirement, and to supply the converted power to the secondary battery. These recitations of claims 56 and 75 are also contrary to Ramsier for similar reasons.

In Ramsier, the processor **200** receives a digital signal from the analog-to-digital converter **204** that indicates that a battery is present and what type of battery is docked. Ramsier does not teach that the analog-to-digital converter **204** is instructed to receive power from a power source...and supply the converted voltage to the secondary battery. Micro processors are not designed to transmit current nor are analog-to-digital converters designed to convert voltage. They convert an analog signal to a digital signal for use in a processor. Furthermore, the processor **200** is not supplying converted power to a battery.

Therefore, Ramsier fails to teach all of the claimed elements and for these reasons claims 56 and 75 are allowable over Bork.

Claim 66

The Office Action rejects independent claim 66 by stating that Bork teaches all of its elements. Claim 66 recites, in part, that the supervisory circuit determines a voltage requirement of the secondary battery, and the supervisory circuit then instructs the voltage converter to supply a voltage to the secondary battery in accordance with the voltage requirement. These recitations of claim 66 are contrary to Bork.

In Bork, the Office Action equates the electric circuitry **42/62** to the recited supervisory circuit. The electronic circuitry **42** consists of a regulator **44** and a USB Function Controller **46**. (Fig. 14). The electric circuitry **62** merely consists of the regulator **44.** Configuration **62** lacks the USB Function Controller **46** but seems to work in conjunction with USB Function Controller **64** located elsewhere. The Office Action also equates the recited voltage converter to an unspecified voltage converter integral to the computer and separate from regulator **44**.

Bork teaches that the electric circuitry **42** receives data signals D+ and D- from the PC and furthers the signal to the phone **14** via the function controller **46**. (Col.6, l. 50-55). Bork goes on to teach concerning the USB Function Controller **46**, that component's function is to permit enumeration and power budgeting. (Col. 8, l. 3-4). The USB Function Controller **46/64** "must enumerate the USB device in order to draw **current** out of the USB port on the computer and the **current** drawn could vary from 1-5 load units or the USB Function Controller **46/64** could negotiate with the "USB Host" the maximum amount of **current** the computer will grant and convert the voltage level from V_{bus} (i.e. a nominal +5 volts DC) to whatever voltage is required by the phone. (Col. 8, l. 1-18).

Bork also teaches the electronic circuitry **42** also reduces the +4.5V DC voltage from the PC to the pre-set +3.7V, 370mA power being fed to the cell phone battery **14** via the regulator **44**. (Fig. 14; Fig. 19). Figs. 14 and 19 disclose that the regulator **44** merely converts the PC bus +4.5 V DC voltage to a static +3.7V, 370 mA power source to the phone. Bork is devoid of any other functionality of the regulator **44.** As such, Bork

is disclosing that the Computer delivers a constant 4.5V DC voltage to the USB bus through its internal voltage regulator [not shown] and the regulator **44** then reduces the voltage to deliver 3.7V, 370mA power to a cell phone/battery. It is further apparent that Bork is disclosing that the USB Function Controller **46/64** is controlling the **current** delivered to the cell phone and is not controlling the voltage (as required by the battery) because there is no knowledge of the needed battery voltage by the USB. These disclosures in Bork are contrary to the claim recitations.

Bork does not teach that the supervisory circuit (**42/62** which is the combination of regulator **44** and USB Function Controller **46)** determines a voltage requirement of the secondary battery [of the cell phone]. There is no testing or determination in Bork. Further, Bork does not teach the supervisory circuit instructing the PC's internal voltage converter to supply a voltage to the secondary battery in accordance to the voltage requirement, which neither the regulator **44** nor the USB Function Controller **46** is disclosed to do. Clearly, Bork is not teaching that either the regulator **44** or the USB Function Controller **46** is determining the voltage requirement of the battery then instructing the voltage converter internal to the computer [not shown] to change its voltage output. Even if the asserted interpretation had credibility, such a functionality would cause the USB bus to vary in voltage when a battery is attached thereby causing the voltage delivery to other components attached to a USB port (i.e. a printer, keyboard or disk drive) to vary which is a highly undesirable result and may case damage or malfunction. Therefore, Bork is not teaching all of the claimed elements and for these reasons claim 66 is allowable over Bork. Dependent claims 67-68 and 70 depend from allowable claim 66 and are allowable for at least the same reasons.

Accordingly, for at least the reasons above, claims 53, 66 and 75 are allowable over Ramsier or Bork. Dependent claims 54-65 and 76-81 depend from allowable claims 53, 66 or 75 and are also allowable for at least the same reasons.

103 Rejections

Claims 55 and 59 stand rejected under 35 USC 103(a) as being unpatentable over Ramsier in view of Bork. Claims 58, 60-62 stand rejected under 35 USC 103(a) as being unpatentable over Ramsier in view of Rozsypal (U.S. Pat. App. 2002/0101224). Claims

63-65 stand rejected under 35 USC 103(a) as being unpatentable over Ramsier in view in view of Hockaday (US Pat. 6,326,097). Claims 69 and 71-74 stand rejected under 35 USC 103(a) as being unpatentable over Bork in view of Rozsypal. Claims 77-79 stand rejected under 35 USC 103(a) as being unpatentable over Ramsier in view of McClure (U.S. Pat. 5,198,743). Claims 80-81 stand rejected under 35 USC 103(a) as being unpatentable over Bork in view of McClure. Applicants respectfully traverse these rejections.

As noted above for the §102 rejections in view of Bork or Ramsier, the claims in addition to independent claims 53, 66 and 75 that have been rejected under 35 USC §103 depend from either allowable base claim 53, 66 or 75 and are also allowable over the cited references for at least the same reasons.

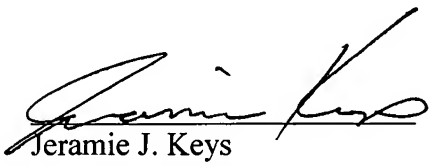
Conclusion

Applicants assert that the application including claims 53-81 is now in condition for allowance. Applicants request reconsideration in view of the amendments and remarks above and further request that a Notice of Allowability be provided. Should the Examiner have any questions, please contact the undersigned.

No fees new are believed due. However, please charge any additional fees or credit any overpayment to Deposit Account No. 50-3025.

Respectfully submitted,

Date: March 16, 2006



Jeramie J. Keys
Reg. No. 42,724

Withers & Keys, LLC
P.O. Box 71355
Marietta, Ga 30007-1355
(404) 849.2093